



## SEQUENCE LISTING

<110> Fukuda, Atsunori  
Tanaka, Yoshiyuki

<120> Sodium/Proton Antiporter Gene

<130> SPO-115C1

<140> 09/888,035

<141> 2001-06-22

<150> JP 1998-365604

<151> 1998-12-22

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<170> PatentIn version 3.1

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cattcaccaa cgagcaagag gggagtggtat tggttgggta aagctccgca tcttgcgggc 240  
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gac tac gcg tcg gtg gtg tcc atc aac ctg ttc gtc gcg ctg ctc tgc 395  
Asp Tyr Ala Ser Val Val Ser Ile Asn Leu Phe Val Ala Leu Leu Cys  
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Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val Ile	
50 55 60 65	
ttg ctg atg acc aaa ggg aag agc tcg cac tta ttc gtc ttc agt gag	539
Leu Leu Met Thr Lys Gly Lys Ser Ser His Leu Phe Val Phe Ser Glu	
70 75 80	
gat ctc ttc ttc atc tac ctc ctc cct ccg atc atc ttc aat gca ggt	587
Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly	
85 90 95	
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Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr Ile Thr	
100 105 110	
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Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile Ser Ile	
115 120 125	
gct gcc att gca ata ttc agc aga atg aac att gga acg ctg gat gta	731
Ala Ala Ile Ala Ile Phe Ser Arg Met Asn Ile Gly Thr Leu Asp Val	
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Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Phe Leu Tyr Ser	
165 170 175	
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Phe Asn Ala Leu Gln Asn Phe Asp Leu Val His Ile Asp Ala Ala Val	
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gtt ctg aaa ttc ttg ggg aac ttc ttt tat tta ttt ttg tcg agc acc	971
Val Leu Lys Phe Leu Gly Asn Phe Phe Tyr Leu Phe Leu Ser Ser Thr	
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 His Pro Val Thr Ser Glu Pro Ser Ser Pro Lys Ser Leu His Ser Pro  
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 Leu Leu Thr Ser Met Gln Gly Ser Asp Leu Glu Ser Thr Thr Asn Ile  
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 Val His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu Met Arg Pro Met  
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 Phe Gly Gly Arg Gly Phe Val Pro Phe Ser Pro Gly Ser Pro Thr Glu  
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 Gln Ser His Gly Gly Arg  
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Asn Glu Ser Ile Thr Ala Leu Ile Ile Gly Leu Cys Thr Gly Val Val  
 50 55 60

Ile Leu Leu Met Thr Lys Gly Lys Ser Ser His Leu Phe Val Phe Ser  
 65 70 75 80

Glu Asp Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala  
 85 90 95

Gly Phe Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Met Thr Ile  
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Thr Leu Phe Gly Ala Val Gly Thr Met Ile Ser Phe Phe Thr Ile Ser  
 115 120 125

Ile Ala Ala Ile Ala Ile Phe Ser Arg Met Asn Ile Gly Thr Leu Asp  
 130 135 140

Val Gly Asp Phe Leu Ala Ile Gly Ala Ile Phe Ser Ala Thr Asp Ser  
 145 150 155 160

Val Cys Thr Leu Gln Val Leu Asn Gln Asp Glu Thr Pro Phe Leu Tyr  
 165 170 175

Ser Leu Val Phe Gly Glu Gly Val Val Asn Asp Ala Thr Ser Ile Val  
 180 185 190

Leu Phe Asn Ala Leu Gln Asn Phe Asp Leu Val His Ile Asp Ala Ala  
 195 200 205

Val Val Leu Lys Phe Leu Gly Asn Phe Phe Tyr Leu Phe Leu Ser Ser  
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Thr Phe Leu Gly Val Phe Ala Gly Leu Leu Ser Ala Tyr Ile Ile Lys  
 225 230 235 240

Lys Leu Tyr Ile Gly Arg His Ser Thr Asp Arg Glu Val Ala Leu Met  
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Met Leu Met Ala Tyr Leu Ser Tyr Met Leu Ala Glu Leu Leu Asp Leu  
260 265 270

Ser Gly Ile Leu Thr Val Phe Phe Cys Gly Ile Val Met Ser His Tyr  
275 280 285

Thr Trp His Asn Val Thr Glu Ser Ser Arg Val Thr Thr Lys His Ala  
290 295 300

Phe Ala Thr Leu Ser Phe Ile Ala Glu Thr Phe Leu Phe Leu Tyr Val  
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Gly Met Asp Ala Leu Asp Ile Glu Lys Trp Glu Phe Ala Ser Asp Arg  
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Pro Gly Lys Ser Ile Gly Ile Ser Ser Ile Leu Leu Gly Leu Val Leu  
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Ile Gly Arg Ala Ala Phe Val Phe Pro Leu Ser Phe Leu Ser Asn Leu  
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Thr Lys Lys Ala Pro Asn Glu Lys Ile Thr Trp Arg Gln Gln Val Val  
370 375 380

Ile Trp Trp Ala Gly Leu Met Arg Gly Ala Val Ser Ile Ala Leu Ala  
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Tyr Asn Lys Phe Thr Arg Ser Gly His Thr Gln Leu His Gly Asn Ala  
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Ile Met Ile Thr Ser Thr Ile Thr Val Val Leu Phe Ser Thr Met Val  
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Phe Gly Met Met Thr Lys Pro Leu Ile Arg Leu Leu Leu Pro Ala Ser  
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Gly His Pro Val Thr Ser Glu Pro Ser Ser Pro Lys Ser Leu His Ser  
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Pro Leu Leu Thr Ser Met Gln Gly Ser Asp Leu Glu Ser Thr Thr Asn  
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Ile Val Arg Pro Ser Ser Leu Arg Met Leu Leu Thr Lys Pro Thr His  
485 490 495

Thr Val His Tyr Tyr Trp Arg Lys Phe Asp Asp Ala Leu Met Arg Pro  
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Met Phe Gly Gly Arg Gly Phe Val Pro Phe Ser Pro Gly Ser Pro Thr  
515 520 525

Glu Gln Ser His Gly Gly Arg  
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